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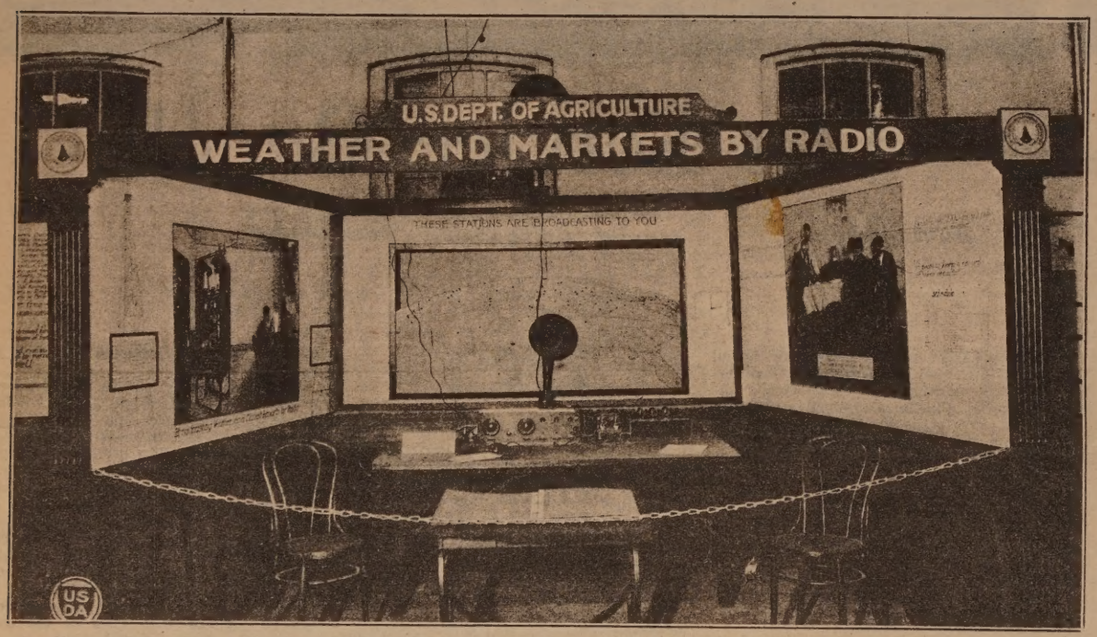
THE HORN SPEAKER

Farm Radio

Radio News for January, 1925 **By J. FARRELL**

A point has been reached where the farmer cannot well do without a radio set. The information broadcast daily by the U. S. Department of Agriculture, through numerous broadcast stations is invaluable to the modern farmer. Mr. Farrell proves it, in a pleasing manner.



One of the radio exhibits of the U. S. Department of Agriculture that is attracting wide attention throughout the country. It leaves nothing to the imagination of the farmer. It tells everything he has wanted to know about radio and what it can do for him.

THE hold that radio has taken on the rural population of the United States is strikingly brought out in the latest survey made by the United States Department of Agriculture. This survey, made through more than 800 county agricultural agents,—Government representatives who come in daily contact with farm people,—developed the fact that the number of radio sets on farms is now twice the number in use a year ago.

The survey showed that on the average there are now in use 130 radio receiving sets in each agricultural county, which figure projected to the 2,850 agricultural counties in the United States rolls up a grand total of 370,000 sets, as compared with a similar estimate of 145,000 sets a year ago. In some counties more than 90 per cent. of the farms are reported to have radio equipment Over 50 per cent. of the county agricultural agents themselves have radio sets in their offices for the dissemination of agricultural news.

The writer, in previous issues of RADIO NEWS has described fully the nation-wide agricultural news broadcast service of the Department of Agriculture from upwards of 80 broadcast stations throughout the country. There is practically no farm community in the United States where crop and market advices are not now available, and the big job now, as the Department officials see it, is to encourage greater use of radio in the reception of these advices. Through the county agricultural agents, whose work it is to encourage the use of modern marketing methods, it is hoped to increase the use of radio until practically every farmer in the country may have the benefit of this comparatively new medium for keeping informed of current market conditions.

The drive for greater farm use of radio will be made by giving individual demonstrations of radio on farms, and through

A group of country agents receiving the U. S. Department of Agriculture market reports being transmitted from a local broadcast station.

novel exhibits that have been devised for showing at country fairs, national agricultural conventions, and at other affairs that bring together large groups of farmers. The survey brought out the information that the greatest farm use of radio is in places where the local county agents and agricultural college officials have established radio on a daily practical basis and visually demonstrated to farmers the simple operation of the sets.

Many county agents reported in the Federal Survey that one of the chief reasons why more farmers do not own radio sets is because they feel that operation of the instruments calls for great technical skill. They are confused by such terms as Neutrodyne, Heterodyne and other radio nomenclature. To overcome this situation, the launching of nation-wide campaigns in country newspapers, farm journals and other publications that reach farmers, which will explain in simple language the theory and practice of radio, is proposed.

Proper methods of erecting antennae should be particularly stressed in these campaigns, say the county agents, inasmuch as in many cases of dissatisfaction with radio the difficulty has been found due to faulty aerials and connections rather than to the sets themselves. Several of the county agents are themselves radio technicians and have won many farmers back to radio by demonstrating the simple principles of tight connections, unbroken circuits, etc.

"GIVE RADIO DEMONSTRATIONS!"

often written in capital letters, is the common plea in the reports. "Farmers have been buncoed so often," says one agent, "that they are skeptical of everything. I have found that the easiest way of interesting farmers is to carry around a demonstration set; rig up a utility antenna in his front yard, tune in, and there it is—so quickly done and so simple that it fairly takes him off his feet." As a result of this suggestion, several of the State agricultural colleges which jointly with the Federal Department of Agriculture employ the county agents, have arranged to equip all their agents with demonstration radio sets.

The State agricultural colleges are keenly interested in increasing the use of radio among farmers, because they feel that radio offers farmers a real opportunity to employ modern distribution methods in their business. The county agent office, farm bureau headquarters, or co-operative marketing organization which does not use radio to keep in touch with current agricultural conditions is now considered behind the times, but it is felt that the greatest benefits will come only when every farmer has his own set in his home.

The survey showed that of the radio sets in use, about 50 per cent. are home-made, particularly where there are farm chlidren of school age. Some of these home-made sets are costly affairs running as high as $350 each. The technical phases of radio are more fully understood in these instances and an important movement has developed in the organization of groups of the farm boys and girls into radio clubs that give radio demonstrations and service to farmers over a wide territory. This service combined with that of the county agricultural agents, and the relaying of agricultural reports by telephone companies over rural lines,

bring the practical benefits of radio to upwards of 1,000,000 farmers.

One novel suggestion offered in the survey is the establishment of so-called "service stations" by manufacturers, so that purchasers of manufactured sets may receive expert advice at some local point on the operation of the equipment, erection of antennae, and other technical phases. This service, it is suggested, should be given free for a limited period until the buyers become familiar with the working principles of radio. There is need in any event, it is said, for simple technical descriptions with each set, a kind of "what makes it work" explanation. In conjunction with the service stations it is proposed to give written courses in radio technique.

Government agricultural officials are greatly pleased with the extent to which farmers are using radio, as revealed in the survey just made, and feel that the coming year will show even greater progress. Farmers generally are now in the best financial condition in four years, and the factor of cost of radio sets is less of a hold-back to purchases than at any time since the establishment of radio broadcasting. They have the price, and with radio being regarded as a necessary farm implement, it will not be long, it is felt, before radio sets on farms will be as common as milk pails.

Radio Humor

FROM THE MARCH, 3082, ISSUE OF "RADIOVISION"

News item:

Scientists at the Tampa, Florida, ski grounds have unearthed another of those queer specimens of the Genus Homo. The skull has the usual indentations or depressions which are so common in specimens that are believed to have lived about the year 1925.

ABOUT 1924 A.D.
THE PROBABLE CAUSE

YEAR 3082 A.D.
RADIOPHRENOLYSIS
IN HOMO SAPIENS.

The theory is prevalent that the deformity resulted from the habitual use of the old head-phones which seem to have been used in the reception of messages, the constant pressure causing the tissue to waste away.

The malady has been termed *Radiophrenolysis*. The sketches give the scientist's conceptions of the appearance of this primitive race which one time roamed the earth.

—*Contributed by Clyde E. Volkers.*

ASK DAD—HE KNOWS

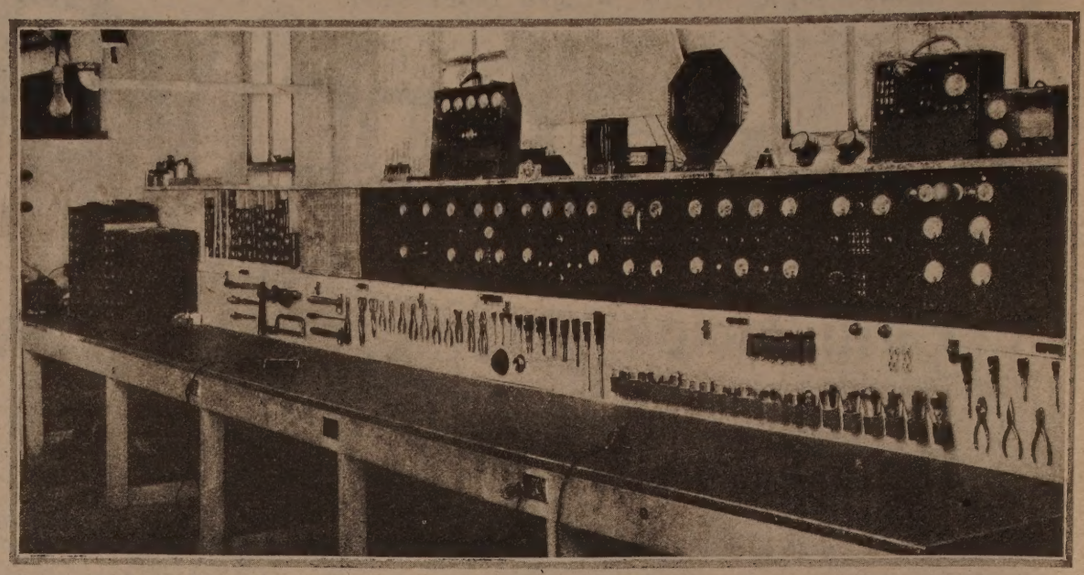
"Pa, which is worse—an automobile maniac or a radio nut?"

"A radio nut is the worst thing on earth, my boy—an automobile maniac kills you quickly with his gas buggy and it's soon all over, but a nut with a loud talker drives you crazy and keeps you that way the balance of your life."

—*Contributed by H. C. Newton.*

IT'S THE BUNK

When people say they receive radio messages through iron beds—it's the "bunk."



The Service Bench

Advertising for Enterprising Servicemen—

Conducted by
Zeh Bouck

PUBLICITY and advertising are the oil and grease on the cogs of modern industry. Advertising is a direct and unequivocating plug for a product or one who sells it. As far as the serviceman is concerned, it may take several forms, aside from the mouth-to-mouth advertising of satisfied customers.

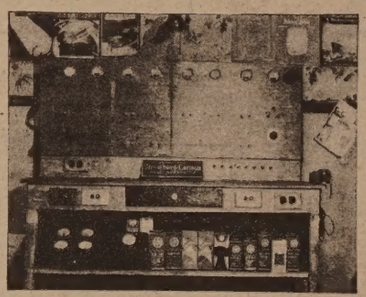
The shop sign itself may be made an attractive advertisement. The manufacturers of practically all receivers and tubes are glad to supply their dealers and representatives with a variety of signs, from the simple placard to the flashing electrical display, at cost. These signs incorporate the dealer or serviceman's name in an advertisement of their own products.

If the serviceman possesses a service truck, he should take advantage of its possibilities as a mobile advertisement. Each side should be placarded with a forceful and colorful declaration of name and specialty. Several slightly unconventional ideas for such signs are contained in the suggested newspaper advertisements on the opposite page. The truck should be maintained clean and shining. The wording of the sign should be simple—the colors brilliant but attractive and not "sickly."

Newspaper Advertising

Newspaper advertising is useful in two ways. In the first place it provides an effective method of direct appeal. Secondly, it paves the way for the free appearance of publicity items. The amount of space taken will be determined, for the greater, part by the rates—which are reasonably low in all but the large city newspapers. It will be found generally that a series of small advertisements is much more effective than a few attempts at large space, at the same cost.

You will find on the page opposite sample newspaper advertisements for the radio serviceman—advertisements running the entire gamut of space and appeal. They have been prepared with a thought to providing elasticity. The space may be varied in several cases by changing the length of stock borders, and the majority of the layouts admit of considerable latitude in copy. However, in many instances, it will be desirable to change only the name of the service organization. The types used in the portions of the advertisements that have been set up, are standard fonts, and can be duplicated or very closely approximated by almost any local printing-shop.



A Canadian service bench—that of A. Bellemare, Shawinigan Falls, Quebec. Extremely neat, light and roomy. The service bench itself can be made an interesting display, contributing considerably to service and accessory sales.

These ads can be used by the serviceman in several ways. Line-cuts can be made to any desired size, direct from the illustrations shown. Such cuts, of course, will duplicate the type exactly. The portions devoted to the names of the servicemen can then be mortised out, and new names substituted in a harmonizing type. Your local printer can do this for you. Another possibility is to make line-cuts only of the display or illustrative material, and to reset the complete advertisement in accordance with your own requirements. Also, the Service Bench has made arrangements whereby the serviceman can be supplied with mats of the entire series of twelve advertisements at the nominal cost of one dollar. Send in your requests with a check or a dollar bill pinned to your letter, addressed to Dept. M, RADIO NEWS. These mats are standard single and double column sizes and include all hand work—pictures, display lettering and in some cases borders—but not set-up type. From these mats, your local printer can make stereos, and set up the advertisements as shown here or with variations as you require them. This will save you the large sum ordinarily spent for the cuts.

The accompanying advertisements are by no means limited to newspaper publication, and many of them are readily adaptable to postcards, envelope stuffers, blotters, stickers and circulars.

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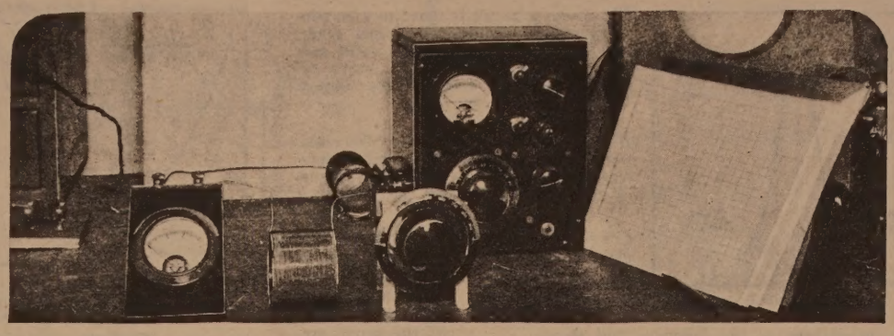
Subscribers, advertisers, photographers and writers, please use the following address;

THE HORN SPEAKER
P. O. BOX 53012
DALLAS, TX 75253-0012

~RADIO NEWS HOME LABORATORY EXPERIMENTS~



Laboratory apparatus used to obtain the data presented here

Tuned Circuits and How They Function

WHAT happens when we tune a receiver? We turn the dial, one station fades out, another comes in. Why? By this simple question we are brought immediately into direct contact with some of the most fundamental problems in radio. This apparently elementary question is one of the most difficult to explain.

When a radio receiver is tuned the operator demonstrates—although he probably doesn't realize it—one of the most fundamental things in radio—the characteristics of "tuned circuits." We have all seen diagrams of "tuned circuits" such as that indicated in Fig. 1. Here L is the coil, which consists of some 50 to 100 turns of wire wound on a tube, and C is the variable condenser, which consists of a number of metal plates, some stationary and others movable, the two groups of plates being insulated from each other. One of the ends of the wire from the coil is connected to the movable plates, and the other end is connected to the stationary plates. See Fig. 2.

Now we all know (if we don't we can find out by opening up the cabinet of a receiver and watching what happens as we turn the dial) that when we turn the dial of an ordinary receiver we cause the movable condenser plates to turn and mesh more or less with the stationary plates Evidently this operation of tuning a set has something to do with the position of these plates. We can also determine the fact, by referring to the list of call letters on page 332 of the October issue of RADIO NEWS, that the movable condenser plates are most completely meshed with the stationary plates when we are tuned to some station broadcasting on the longer wavelengths around 500 meters. When we are listening to low wavelength stations around 200 meters we will note that the condenser plates are almost completely out of mesh with each other.

Let us take a coil and a condenser and connect them in series with a meter which will indicate whether there is any current flowing in the circuit. Now suppose we lived but a short distance from some broadcasting station, WEAF for example, whose transmitter is located on Long Island, N. Y. Now we set up the coil, the condenser and the meter, and as we slowly turn the condenser dial we watch the meter. If we start at the position where the movable plates are all out of mesh we will find that it will be necessary to rotate the dial until the movable plates are about two-thirds in mesh before anything happens. Then we will note that the meter will rather suddenly begin to indicate some current, and that the current will very rapidly increase as the dial is slowly turned. Then the needle of the meter will, for a moment, reach a high point and stop increasing. As we continue to turn the dial the needle will rapidly begin to return to zero. If we were to plot the movements of the meter needle on a piece of cross-section paper, we would get a curve like that of Fig. 3. This is known as a "resonance curve," and the point at which the needle indicated a maximum current is the point of exact resonance. Now when we tune a single control set having several tuned stages, the dial causes several condensers to turn, so that we get the combined effects of several of these "tuned circuits."

In tuning a set we cannot ordinarily measure the current as we did in the preceding experiment, for the currents are too small. But in place of the current we can listen to the loud speaker volume and note that it rises, reaches a maximum and then decreases exactly as did the current. And whenever we tune to a station we will note the same things—a rapid rise, a definite peak and then a rapid fall. Now we have, perhaps, some idea of what happens when we tune the set, and we can picture in our mind the rising and falling currents in the various tuned circuits. But why do these circuits behave in this manner?

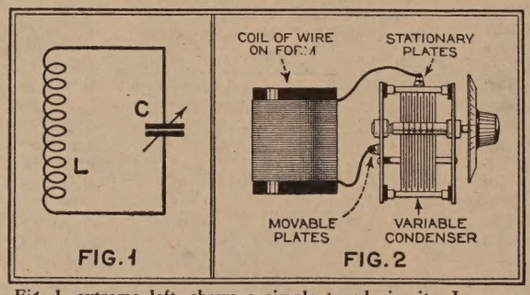


Fig. 1, extreme left, shows a simple tuned circuit. L represents the coil and C the tuning condenser. Fig. 2, to its right, shows in picture form how the parts for such a circuit are arranged

Here we have to get at the meaning of some new terms. We are all familiar with the word "impede." Rust in a water pipe impedes the flow of water through it—and in electrical circuits there are certain things that impede the flow of currents. Just as we could plot a curve showing the impedance offered to the flow of water due to various amounts of rust in a pipe, so with electrical

page 4 ..... The Horn Speaker, Box 53012, Dallas, Texas 75253-0012 .... April 1984 ..

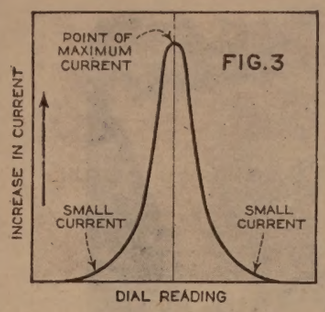
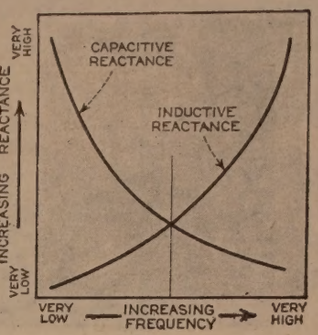


Fig. 3—As a circuit is tuned to a certain frequency the current in the circuit gradually increases to a maximum value and then decreases similarly. A curve of this action would look like that shown to the left

Fig. 4—Capacitive reactance decreases with increase in frequency, while inductive reactance increases. The two curves to the right illustrate this action



circuits we can plot curves showing the effect on the flow of current of various types of electrical impedances, as the following will show.

In electrical circuits the three essential types of impedance are resistance, capacitive reactance and inductive reactance—capacitive reactance is the impedance to the flow of current offered by a condenser, and inductive reactance is the impedance to the flow of current offered by a coil of wire. The latter two types of impedance are not constant but depend on the frequency or wavelength of the current—the impedance due to resistance is fairly constant. At very low frequencies the capacity reactance of a condenser is very large and the inductive reactance of a coil is very small. At very high frequencies the capacity reactance is very small and the inductive reactance very large. That is:

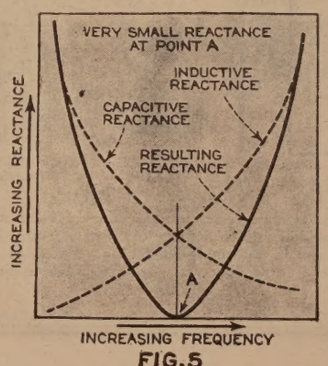
Frequency	Inductive Reactance	Capacitive Reactance	Resistance
Very low	Small	Large	Essentially
Very high	Large	Small	constant

The actual value of either the inductive or capacitive reactance is also a function of the size of the condenser or coil—large condensers have *less* reactance than small condensers, large coils have *more* reactance than small coils. We can therefore vary the impedance either by changing the frequency or by changing the electrical size of either the condenser or the coil.

If the variation with frequency of the reactance of a coil and of a condenser is plotted in the form of curves we get the results given in Fig. 4. Now the laws of electrical circuits are such that the impeding effects of a coil and a condenser have opposite effects on a circuit, so that when they are both in the same circuit they tend to nullify each other. The resulting impedance of a circuit to the flow of current is found by subtracting the inductive reactance from the capacitive reactance. This has been done in Fig. 5. Here we note that at one point, "A," the impedance reaches a minimum value, and that at frequencies either higher or lower the impedance rapidly increases. We also can observe the very interesting fact that if we look at this curve upside down it has a form somewhat similar to that given in Fig. 3 where we plotted the current in the tuned circuit. Just as the greatest amount of water will flow through the pipe that offers the least impedance to its flow, so the point of maximum current in a circuit must correspond to the point of minimum impedance.

This is the point that tells us what happens when we tune a receiver. What we are doing is adjusting the capacity to a value such that, at the frequency of the station we desire to receive, the capacitive reactance is exactly equal to the inductive reactance of the coil, so that they cancel each other, the maximum amount of current flows and the signals are loudest.

Fig. 5—By subtracting the inductive reactance from the capacitive reactance, we find the resulting impedance of a tuned circuit. At "A" minimum impedance is offered by the circuit to the received signal, whereas at points either side of "A" the impedance increases



For those who know algebra, all these facts can be explained by equations. The capacitive reactance is:

$$X_C = \frac{1}{2\pi f C}$$

and the inductive reactance is

$$X_L = 2\pi f L$$

When a circuit is in tune these two effects are opposite and equal. That is

$$X_C = X_L$$

$$\frac{1}{2\pi f C} = 2\pi f L$$

and transposing and solving for "f" we get

$$f = \frac{1}{2\pi\sqrt{L\,C}}$$

Since all the factors except C are fixed, in tuning we actually determine the capacity C which satisfies this equation, so that the circuit will be resonant to the frequency "f" of the station we want to receive.

The height of the curve of Fig. 3 depends largely on the resistance of the tuned circuit and practically, the maximum current at resonance in a simple tuned circuit is inversely proportional to the resistance of the coil, for the condenser usually has negligible resistance. Therefore *twice* the coil resistance reduces the current at resonance to *half;* if the coil resistance is reduced by a factor of four the current is four times greater. From the standpoint of getting large currents at resonance it is important to use low resistance coils.

It should be realized, however, that the resistance of the circuit has a marked effect on the current only *at* or *near* the resonant point. At all other points the reactance rather than the resistance determines the current. At a point where the reactance is say of the value of 100 ohms the current will be practically the same whether the coil has a resistance of one ohm or ten ohms. But in most cases we are anxious to get large amounts of current at resonance relative to the currents that flow with the circuit out of resonance and it is for this reason that the coil resistance is important.

Mailbox

Dear Jim,
I've just purchased a radio with "unusual" tubes. I've never seen any like them. Perhap a reader(s) could let me know about them. Could be a collector's item for tube collectors. Here is a sketch.

George Friedrich
7162 Jacquelin Lake
Custer, WI 54423
Tel. (715) 592-4901

Note.... You probably have a McCullough 401, first AC tube patented by McCullough.

Dear sir,
I have in my possession a very rare TV tube. The DeForest tube that made television possible in 1938.
Can you tell me its value.

Althea Pratt
9 High Street
Beacon NY 12508

Note... No, we do not price items for collectors. Thank you for writing.

ANTIQUE AUDIO

SALES AND SERVICE

* ALL VINTAGE RADIOS, PHONOGRAPHS, SPEAKERS, TELEPHONES, TELEGRAPHS, TELEVISIONS
* TUBES
* NIPPER DOGS, CERAMIC 2½ IN. TO 12 IN.
* OVER 1,000 TAPED PROGRAMS
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MONDAY - FRIDAY 9-5

TECHNICAL MILESTONES

ONE of the greatest and most significant triumphs in the history of radio occurred on the morning of January 21st when the address of King George V of England, opening the Five-Power Naval Conference in London, was carried to the world at large over a globe-girdling network of air waves and wires—a crowning achievement, majestic in scope and epochal in the linking together of nations in a manner hitherto impossible.

In this erasure of space strange tricks were played with man-made time. Tokio tuned in at 8 p. m., while New Yorkers arose at 6 a. m. to listen simultaneously to words spoken in London at 11 a. m. The mariner approaching the international date line might have heard King George's well modulated accents on the evening before they were uttered, and six minutes later listened to the conclusion of the speech on the evening after. But the scientific feat of the greatest of all international broadcasts, to date, inspiring as it is, is merged in the hope which it suggests of carrying the spirit of friendship across the boundaries of land and sea, from nation to nation, by bringing whole populations in audible presence at the seat of peaceful council.

Pickup of the proceedings at the conference was arranged by the British Broadcasting Corporation, which also put them on the air from the G5SW station. The National Broadcasting Company picked up the signals at its Riverhead, Long Island receiving station, whence they were transmited by telephone wire to the control-room in New York City. From this point they were distributed to fifty-nine stations throughout the country.

The Columbia Broadcasting System received its program through the shortwave Transatlantic telephone station of the British Post Office, at Rugby, England. It was picked up in the United States by the low-wave station at Netcong, N. J., otherwise used for the trans-oceanic telephone circuit by the American Telephone and Telegraph Company. Telephone wires brought the messages to the New York studios where they were distributed to the network stations.

Undoubtedly this event brought together the greatest audience ever assembled to listen to the same program, a fact alone that makes January 21st red-letter day in the history of radio.

The first commercial home television receiver for tuning in talking motion pictures. Much developmental work remains to be done, but public demonstrations of this apparatus indicate that much may be expected of it in the future

Home Radio Talkies

Home radio talkies, or synchronized sight and sound broadcasting, left the laboratory in commercial form only a short time ago and for the first time have been demonstrated before the public.

That the exhibition was not so much a technical advance as it was a practical exhibition, was emphasized by D. E. Replogle of the Jenkins Television Corporation.

The radio-talkie program for this demonstration was broadcast simultaneously through two stations; W2XCR which, transmitted from sound films, and W2XCD which broadcast the silent films run through the television pick-up apparatus.

RADIO NEWS FOR APRIL, 1930

ANTIQUE ELECTRONIC SUPPLY

NEW ITEMS

PARTS FOR CRYSTAL RADIOS

CRYSTAL DETECTOR ASSEMBLY - includes crystal, stand, and Cat's Whisker mounted on board	AE-109	$ 2.25
CRYSTAL HOLDER - stand, arm with Cat's Whisker, screws, nuts. Less crystal	AE-110	1.25
GALENA CRYSTAL - Mounted, lab tested	AE-111	1.00
CAT'S WHISKER -	AE-112	2/1.00

TUBE BOXES

Plain white boxes with dividers to cushion tube.
Prices apply to quantities of 25 of a size. Order by size designation.

MIN. SIZE (7/8 x 7/8 x 2 15/16)	$ .11ea
GT SIZE (1 5/16 x 1 5/16 x 3 3/16)	.12
LGT SIZE (1 5/8 x 1 5/8 x 5 5/16)	.13
G SIZE (2 1/16 x 2 1/16 x 6 1/8)	.15

NIPPER DOG

9" Ceramic statue of the famous RCA dog. From Japan. AE-108 11.95

RADIOS AND SPEAKERS

New price list of antique radios and speakers available from us. Send business size, self-addressed, stamped envelope.

CAPACITOR SPECIALS

OLD STYLE TUBULAR CAPACITORS - new old stock

.025 MF.	200 V.	$ .15
.22 MF.	200 V.	.50
.22 MF.	400 V.	.60
.001 MF.	600 V.	.25
.0027 MF.	600 V.	.25
.004 MF.	600 V.	.25
.004 MF.	1600 V.	.40

50% off when ordered in quantities of 10 or more, any one type.

*Some are slightly leaky but make excellent by-pass capacitors.

TUBULAR ELECTROLYTIC CAPACITORS

80 MF.	450 V.	1.90

TUBULAR HIGH VOLTAGE
(for early TV - 10,000 volt tested)

.005 MF.	5000 V.	4.90
.05 MF.	5000 V.	6.90

TUBE SPECIAL

Type 10, 27, and 71A new in individual cartons - $2.00 each in quantities of 5 per type.

Minimum order is $10.00. Add $2.00 handling, plus sufficient shipping on each order.

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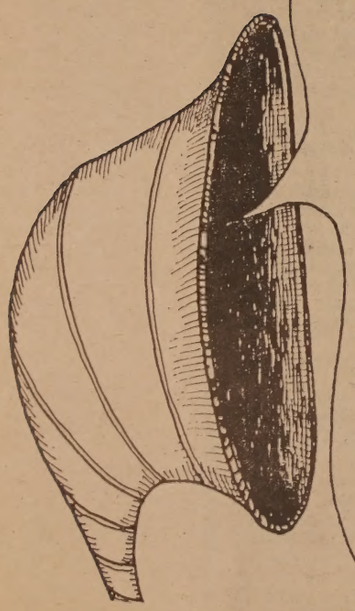
THE MICHIGAN ANTIQUE RADIO CLUB

PRESENTS A

SWAP MEET



SATURDAY MAY 5, 1984
FROM 8am. TO 1pm.

IN THE MARSHALL STREET NATIONAL GUARD ARMORY

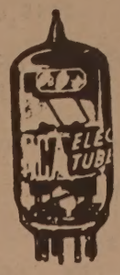
LANSING, MICHIGAN

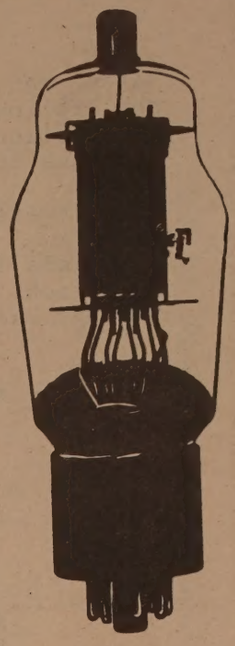
$4.00 in advance $5.00 at the door

tables will be provided

for more info. contact: JIM CLARK 1006 PENDLETON LANSING, MI. 48917 PHONE:(517) 323-9595

7,000,000 TUBES





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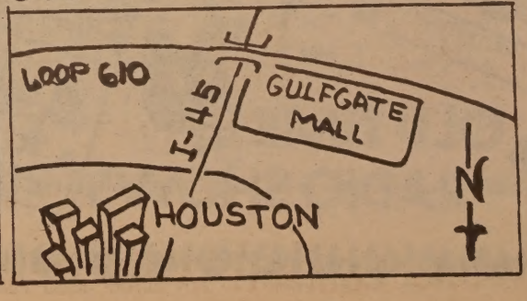
GULFGATE SHOPPING MALL I-45 AT LOOP 610 SOUTH

SHOW - 9:00 - 5:00
AUCTION - 1:30 - 5:00



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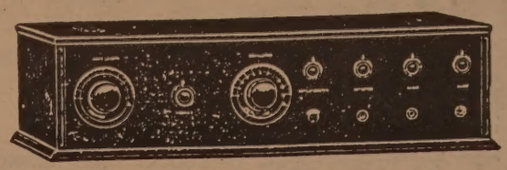

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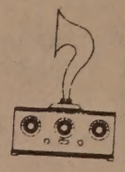

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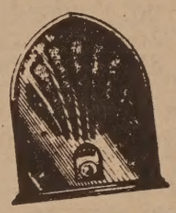

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(713) 521-0102

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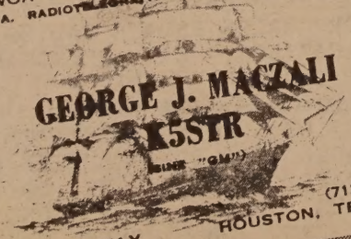
9-6

QCWA VWOA SOWP RETIRED MARINE SHIP OPR.
COASTAL STA. RADIOTELEGRAPH OPR. ITT GALVESTONRADIO/KLC

GEORGE J. MACZALI
K5STR



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TUBES. UNUSED, IN ORIGINAL cartons. Also filament and power transformers. Write needs. send S.A.S.E., Fala Electronics Box 04134-13, Milwaukee, WI 53204.

****

****
OVER 100 RADIO ITEMS FOR SALE/ SWAP. SEND LARGE S.A.S.E. OFTEN FOR LIST. (UPDATED WEEKLY) JIM CLARK, 1006 PENDLETON, LANSING, MI 48917..
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FOR SALE RADIO RIDER MANUALS, VOL. 1 TO 23, T.V. VOL. 1 TO 7. SEND SASE FOR LIST, CLARENCE STEVAHN, BX 576, WISHEK, ND 58495.
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FOR SALE- CATHEDRAL, BATTERY AND A.C. RADIOS. SEND SASE. J. ALBERT WARREN, BOX 279, WAVERLY, PA 18471.
****
FOR SALE: WESTERN ELECTRIC 215A's tubes. $15.00 each new in sealed box, Lee Williams, 22026 3 pl west, Bothell, WA 98021.
****
SELLING RADIO COLLECTION. Send S.A.S.E. for list of radio magazines and books. D. Harrison, 714 N. Hague Avenue, Columbus, OH 43204. Phone (614) 279-4619. No -- collect calls, please.
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DX CRYSTAL, ONE TUBE sets, kits, plans. handbooks, coils, supplies. Obsolete tube quotations. Catalog $1.00; none free. Laboratories, 1477-H , Garden Grove, CA 92642.
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TUBES FOR EARLY ELECTRIC RADIOS. SASE FOR FREE PRICE LIST. SAM FAUST, CHANGEWATER, NJ 07831.
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HOMEBREWERS- 1/8" glossy black bakelite panels any size. two 20 cent stamps for sample. BOB, W6ME, 4178 CHASIN STREET, OCEANSIDE, CA 92056. PS, NEED TUNING CONDENSERS FOR NATIONAL SW-5.
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MOVING SALE: VARIOUS RADIOS AND MISC. FOR SALE. SEND SASE AND YOUR WANT LIST TO GET MY LIST. SETS PRICED TO SELL. KENT KING, 5028 DIERKER, APT. C2, COLUMBUS, OH 43220.
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REPAIR SERVICE. I will restore that set (tube type or transistor or auto) like new for cash or I will trade for tubes for my services. No job too small or too big. Experience runs from Philharmonic Scotts to Silvertones, over a 24- year span. SALE. A53-C 1:3 Stancor interstage, new xformers in cartons for $13 ea or 2 for $25. OLD RADIO HOSPITAL; P. O. Box 31555, Houston, TX 77235. After 7:00 p.m., ask for Maury at (713) 723-4254.
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TUB TESTERS, SIGNAL GENERATORS AM/FM SWEEP, SCOPES, TO ALIGN RADIOS AND BLACK AND WHITE TV. RIDERS RADIO AND TV SERVICE MANUALS. LIST TE4-84 50 CENTS AND LARGE SASE. KRANTZ, 100 OSAGE AVENUE, SOMERDALE, NJ 08084.
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AVAILABLE MARCH 1ST 1984, A 17 PAGE LIST OF RADIO LITERATURE. IT WILL CONTAIN MANY 1920'S AND 1930'S RADIO MAGAZINES, CATALOGS, BOOKS, MANUALS, SERVICE LITERATURE, AND MISC. PAPER ITEMS. ---- IN ADDITION THERE WILL BE A 1 PAGE LIST OF MISC. RADIO ITEMS SUCH AS RADIOS, TUBES, TEST EQUIPMENT, PARTS, ETC. TO GET A COPY OF THIS LIST SEND $1.20 IN STAMPS OR MONEY TO: GARY B. SCHNEIDER, 9951 SUNRISE BLVD., #R-9, NORTH ROYALTON, OHIO 44133. (NO COPIES CAN BE GIVEN FREE DUE TO THE HIGH PRINTING AND POSTAGE COST). THANK YOU..
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SALE OR TRADE: SPLITDORF 1 $55.00 -- Music Master 1 $85.00 -- Mesco 1 $70.00 -- Westinghouse type FL $80.00 -- AK model L, no reproducer, $25.00 -- RCA 103 speaker $45.00 -- Weeco Gem crystal set $85.00 -- Traveler portable $85.00 --- will consider any of these plus Neutrowound AK 567 cathedral, A C Gilbert crystal set, Lambert crystal set and Martian crystal set for any other crystal set especially Commerce and National Radiophones, Anthony Caserta, 47 Vista Lane, Levittown, NY 11756
****
A K BREADBOARDS - 10C COMPLETE, 10A MISSING CAN, NEED RESTORATION $400.00 FOR BOTH. FOUR CATHEDRALS $300.00. MAJESTIC 463 ART DECO $90.00. SUPERIOR 1240 TUBE TESTER $20.00. PHILCO SIGNAL GENERATOR $15.00. KINGSTON AND KODEL "B" ELIMINATORS $20.00 EACH. SASE PLEASE. RAY MINER, 1215 AVENUE B, FORT MADISON, IOWA 52627.
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HALLICRAFTERS S-20R $85.00 -- NATIONAL ONE-TEN $90.00 -- WESTERN COIL AND ELECTRIC RADIODYNE WC-17 BATTERY SET $75.00 -- NATIONAL SW-3 $175 (INCLUDING MATCHING HOME BUILT POWER SUPPLY AND 7 SETS OF COILS; PERFORMANCE IS SURPRISING) ----- SEND 2 STAMP S.A.S.E. FOR COMPLETE AND UP TO DATE PHOTO LIST. RON BOUCHER, 376 CILLEY ROAD, MANCHESTER, NH 03103, (603) 669-1698.
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FOR SALE: OLD RADIOS AND TEST EQUIPMENT. SEND LONG S.A.S.E. FOR PIX PRICE LIST. JOHN MARTIN, 817 COOK AVENUE, BILLINGS, MT 59101 (406) 252-4287.
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PHILCO MOD 16 CATHEDRAL $175.00, PHILCO MOD. 39-7 $40.00, ZENITH 1937 MOD GS222 $60.00, ZENITH MOD 8G05Y TRANSOCEANIC $40.00, WANT PHILCO 620B (AC ONLY). ALL RADIOS SOLD AS IS, ALL IN WORKING AND GOOD CONDITION, SHIPPING EXTRA. WAYNE DIMMLER, 13 MIDTOWN ROAD, CARLE PLACE, NY 11514 (516) 747-1325. AFTER 6 P.M.
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FOR SALE PHILCO CONSOLE with short wave and 78 RPM changer, walnut cabinet. Mint condition, Model 46-1226. Make offer. Bud Schwab, 20413 Roca Chico Drive, Malibu, CA 90265. (213) 455-2893.
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JOIN THE CALIFORNIA HISTORICAL RADIO SOCIETY. Journal published six times a year, free ads for members, swap meets four times a year. Write: CHRS, P. O. Box 1147, Mtn. View, CA 94042-1147.
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FOR SALE: WESTINGHOUSE RC, RADIOLA V (AR-885), KENNEDY 281, and others. R.S. Renne, 1020 Idlewild Drive, Dixon, IL 61021.
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1. GREBE SYNCROPHASE MU-1, mint condition inside and out, working, with tubes $160.00 - 2. Crosley 51, excellent, original. working with tubes $75.00 -- 3. Crosley 52, excellent, original, working, with tubes $90.00 -- 4. Crosley Trirdyn. excellent, all original, with tubes $75.00 -- 5. Crosley IITA, all original, mint. no tubes $85.00 -- 6. Hearldyne TRF, 1925, very good, with tubes $60.00 -- 7. Philco 89, excellent, plays weak, $80.00 8. Ingram Mantel Clock Radio. mint condition, radio and clock work $180.00 --- SPEAKERS- 9. RCA UZ-1325 horn, mint and working, $60.00 -- 10 Atlas horn, mint and working, $65.00 -- 11. Muzette horn, mint and working $65.00 12. Tower Meistersinger horn, base repainted but looks good, plays weak $50.00 ---- Jerry Finamore, Rd#2 Box 623, New Castle, PA 16101 Phone (412) 656-0338.
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FOR SALES ESTATE RADIOS, BOOKS, MAGAZINES, VERY REASONABLE. AK CELLARETTE, EDISON CONSOLES, RADIOLA TAPESTRY SPEAKER $35.00, COIN OPERATED TRADIO RADIO $30.00 -- EMPIRE RADIO IN SHAPE OF HOUSE $35.00 -- ALL PLUS UPS. LIST LONG SASE. ROBERT AND HELEN CORUM, 125 LOCUST AVENUE, WALLINGTON, NJ 07057 (201) 773-0918.
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SUPPLY FOR SCOTT 12 TUBE ALL-WAVE (SINGLE DIAL) FOR POWE SUPPLY FOR SCOTT 12 TUBE ALL-WAVE (2 DIAL); ALSO NEED S/W COILS FOR ALL WAVE 2 DIAL. SEND LARGE S.A.S.E. FOR COMPLETE AND UP TO DATE LIST. RON BOUCHER, 376 CILLEY ROAD, MANCHESTER, NH 03103, (603) 669-1698.

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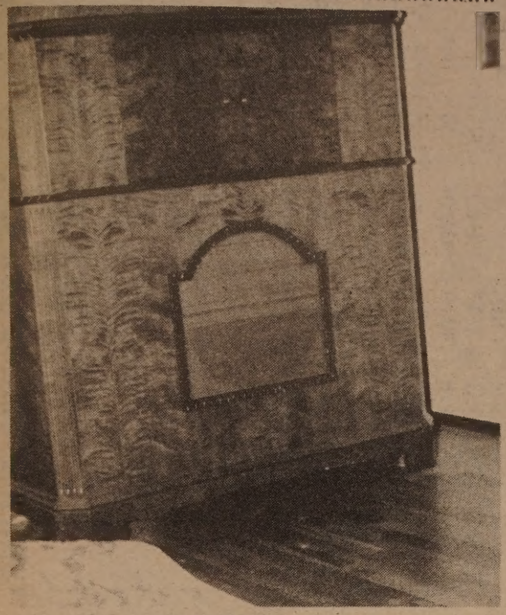

McMurdo MASTERPIECE VI with speaker in original cabinet. All in perfect condition. $1,000. M. DeMayo, 17533- 12 Avenue NE, Seattle, WA 98155. (206) 362-7043.

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FOR SALE- BATTERY AND ELECTRIC RADIOS, including 2 tall clock-radios, several battery Radiolas, communication receivers; 28 bound volumes of EXPERIMENTAL WIRELESS AND WIRELESS ENGINEER 1924- 1956; Rider manuals. Send SASE for complete list. Dan Voydanoff, 1141 Yorkshire, Grosse Pte Park, MI 48230.

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ANTIQUES: Carrier Condenser Broadcast Microphone. Old. Nice looking. No stand. $45.00; Shure Cardioid 556C Broadcast Mike. Excellent. $45.00; Lepel "Semi- Quenched" Spark Gap. $25.00; Workrite Superneutrodyn. Looks good. $65.00 W/O tubes; Radiola III with clear glass open fil. tipped 11s. $67.50; Sets not tested. Leeds and Northrup antique decade box. $25.00; Magnavox R3 Horn Speaker. $65.00; Browning Drake basic coil and condenser set. Good. $30.00. All plus UPS. Buy spark equipment parts. Paul C. Crum, 6272 N. Cicero Avenue, Chicago, IL 60646. (312) 282-3033.

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NOTICE-- NOTICE--- AUDIO TRANSFORMER COIL WINDING SERVICE IS DISCONTINUED EFFECTIVE JANUARY 1, 1983. RICHARD RAY, 423 ORCHARD, CANON CITY, COLO

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FOR SALE; RIDER'S TV MANUALS #1 AND #2, RIDER'S TROUBLE-SHOOTER'S MANUALS #1 TO #5 (ABRIDGED), #6 THRU #17 AND #20. ALL $180 PLUS PACKING AND SHIPPING. W. PETERS, 163 S. BROADWAY, LINDENHURST, NY 11757.

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RCS- 728 POWER SUPPLY for battery radios now available in kit or assembled form. Gary Schneider, 9951 Sunrise Blvd., #R-9, North Royalton, OH 44133.

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RADIO PARTS- Three wood frame variometers, one needs gluing, $15 plus 8 lbs. UPS. Honeycomb coils, 1500T and 1250T mounted, 1250T loose with mount and a two coil mount, $15 plus 4 lbs. WD11 brass base good filament $25 plus 2 lbs. SASE, Serge Krauss, 141 Homan Avenue, Elkhart, IN 46516.

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SMALL BUT NICE COLLECTION FOR SALE. SEND SASE FOR LIST. PAUL GIGANTI, 2429 SAN CARLOS, SAN CARLOS, CA 94070. PHONE (415) 593-4723.

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WANTED: 21 INCH MAHOGANY MUSIC MASTER BELL. CONDITION NOT IMPORTANT. CHARLIE STEWART, 900 GRANDVIEW AVENUE, RENO, NV 89503

WANTED: ATWATER KENT CONDENSERS variable, detector and amplifier tube panel and filament control and switch panel. William L. Compton, 11 Harbor Woods Drive, Clearwater, FL 33519.

ARE THERE ANY OF YOU RADIO FANS OUT THERE THAT COULD HELP ME OUT? I NEED AN OPERATOR'S INSTRUCTION MANUAL FOR A PRECISION TUBE MASTER, TUBE AND BATTERY TESTER, SERIES 10-12. WILLING TO PAY WHATEVER YOU REQUIRE FOR A PHOTOSTATIC COPY OR ORIGINAL. ALSO I NEED A TRANSFORMER, AM, DETECTOR/ FM DISCRIMINATOR NO. 32- 4147 FOR A PHILCO MODEL NO. 47- 1230. THE WIRE IN THE COIL IS BROKEN AND AM AUDIO IS VERY LOW. NO FM. COULD ANY OF YOU RADIO FANS REPAIR IT FOR ME? WILLING TO PAY WHATEVER YOU REQUIRE, FOR ANOTHER COIL, OR YOUR SERVICE FOR REPAIRING IT. PAUL P. BROUCHKIE, 545 REDONDO ROAD, YOUNGSTOWN, OH 44504.

WANTED: SCOTT COIL SHEILD CANS (late copper type). Musicmaster radio in deluxe cabinet; Philco Pup radio. Dick Howe, 9318 Wickford, Houston, TX 77024.

WANTED TONE ARM AND REPRODUCER a Edison radio- phonograph combination model C-4, also power supply for the same unit. Quote price and condition. Bill Shawver, Route 2 Box 2720, Kennewick, WA 99336.

WANTED: SE950, SE143, SE1400 and other SE series sets, type B amp., BC131, BC161, and other BC series, SCR equipment, Leutz, Norden Hauck, any GR parts, VT1, VT2, VT5 tubes. Incomplete sets OK. Also Grebe CR equipment. Ray Garner, Route 1 Box 320, Big Sandy, TN 38221.

WANTED: RIDERS VOL. XXII and XXIII. Cabinet Grebe CR-9. Balanced amplifier Radiola III. For sale - trade; Freed Eisemann, NR-20, Bosch 376-BT. Interested in AK's. Bob Nicholson, 3423 Long, Topeka, KS 66605.

WANTED; SCHEMATIC PLUS A GOOD B&W Polaroid (will refund the cost later) for a CHELSEA Super-5 TRF, 1926. If possible, a detailed drawing of the panel's reverse side top would be appreciated. Someone has re-worked the arrangement on mine, wish to restore as originally if possible. D'Arcy Brownrigg, Chelsea, Quebec, J0X 1N0, Canada.

BIDDER- Orr auction at Opelika? Name your price for copy of items sold, prices obtained. Or will copy and return. Ralph Barnett, 3434 E. Oakwood, Decatur, IL 62521.

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